

# SUSTAINABLE GARDENING

FOR SCHOOL AND HOME GARDENS

## Cantaloupe & Watermelon

*Cucumis melo and Citrullus lanatus*



### QUICK FACTS

- Plant family: *Cucurbitaceae* (Gourd)
- Season: Warm
- Life cycle: Annual
- Seed to first harvest: 80-110 days



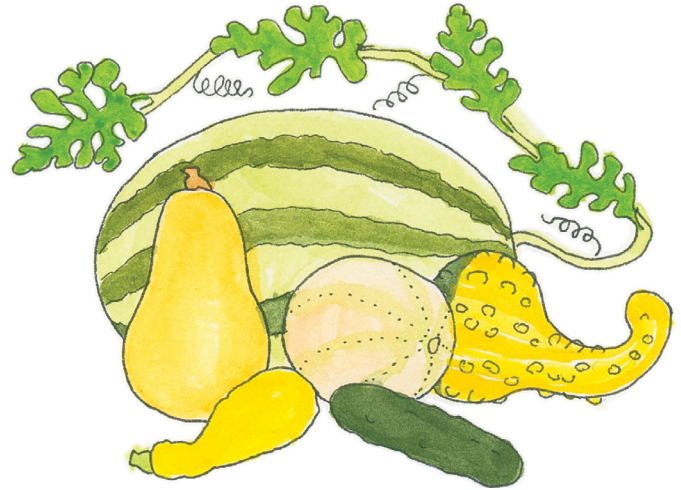
Create a Sustainable Garden by improving soil health, relying on locally available materials and resources, and practicing environmentally sound horticultural practices

# History

Cantaloupe and watermelon are members of the Cucurbitaceae family, also known as the gourd family (see Figure 1). This family includes crops such as cucumbers, summer and winter squash, and gourds.

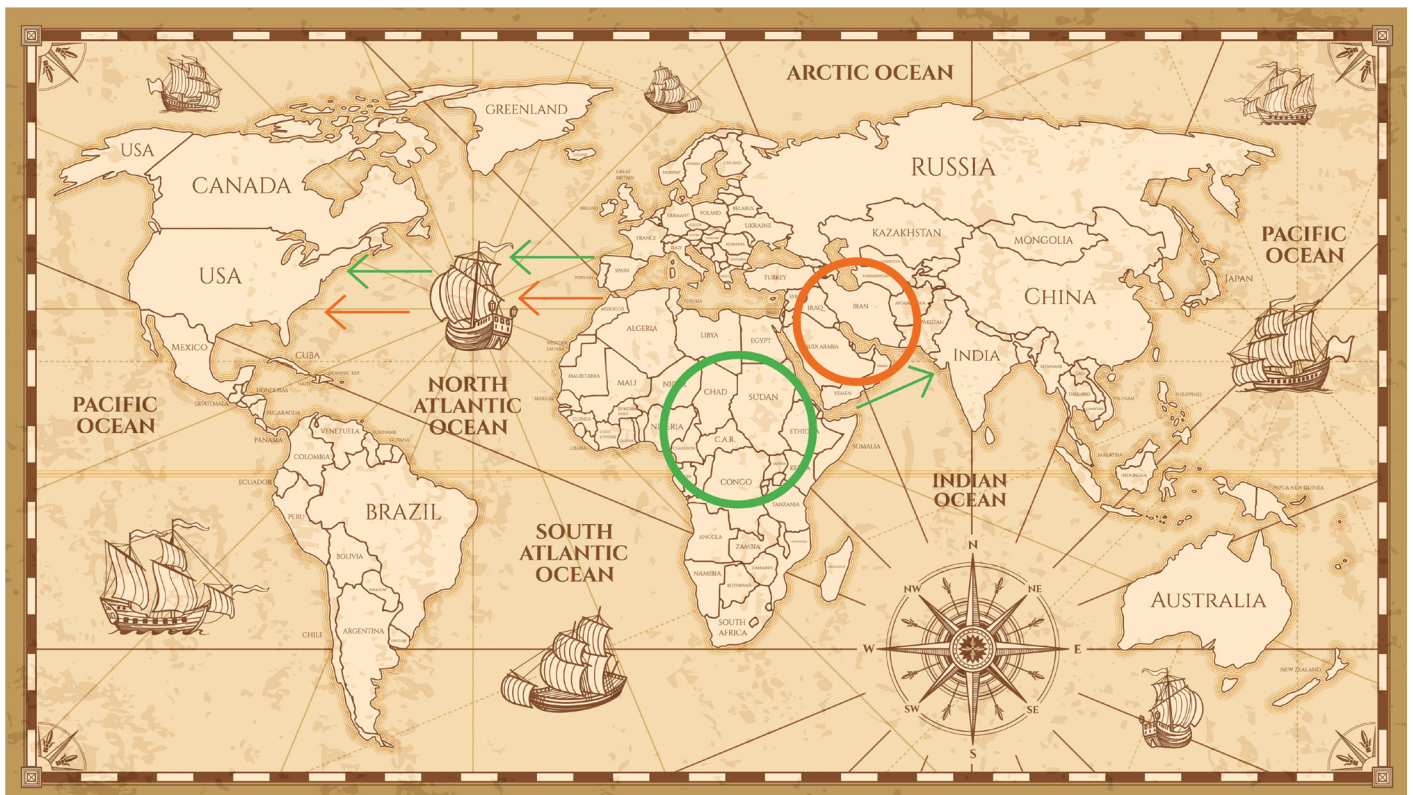
Melon is a general term for a fruit produced by various members of this plant family and refers to netted and non-netted fruits, including the cantaloupe, muskmelon, honeydew and Asian melon. Cantaloupes are often referred to as muskmelons. Musk is a Persian word meaning “perfume,” which refers to the fruit’s musky, sweet fragrance. Most Americans use the word cantaloupe rather than muskmelon to describe this fruit. “Cantaloupe” is believed to derive from the Italian “cantaluppi,” which pays homage to the location where the first cantaloupe was introduced to Rome. Cantaloupe likely originated in the Middle East, specifically Persia (modern day Iran) or Africa. The earliest cultivation recorded is around 2400 BC in Egypt. Seed was reportedly brought to the Americas by Columbus in 1494. By 1535, cantaloupe was grown by Native Americans near Montreal.

Watermelon likely originated in tropical Africa, with production described in ancient Egyptian records more than 4,000 years ago. Watermelons were also cultivated



**Figure 1. Cantaloupe and watermelon belong to the Cucurbitaceae plant family, along with cucumbers, summer and winter squash, gourds and many more.**

in China as early as the end of the 9th century. Watermelon was largely unknown in the Mediterranean countries until introduced by the Moors in the 13th century. Native Americans were growing this crop in the Mississippi and Illinois river valleys during the French exploration of the U.S in the 1600s. Both cantaloupes and watermelons were widely spread throughout the world by colonists and explorers (see Figure 2).



**Figure 2. Map showing the origin and migration of cantaloupe (orange) and watermelon (green) to the U.S.**

Based on the origin areas for cantaloupe and watermelon, these crops prefer hot, dry climates and can grow well in Louisiana if planted in well-drained soil.

Watermelon is more tolerant of the humid climate than cantaloupe. Both crops are annuals (with a life cycle of one year) that require a long, warm growing season.

## Growing

### Varieties

Cantaloupe and watermelon have many varieties producing fruit that vary in color, shape and size. This guide covers cantaloupe and three types of watermelon (diploid/seeded, icebox, and triploid/seedless). Note: Honeydew and Asian melons are different types of melons in the same species but are not covered here.

Most cantaloupe are round with a hard, corky, beige-colored rind with sweet orange flesh. Cantaloupes are

typically separated into two categories: (1) eastern and (2) western (see Figure 3). Eastern types are ribbed or grooved, larger and generally have a shorter shelf life than western types (only a few days). Western types are found frequently in grocery stores and are typically smooth with a corky beige netting, are round and usually have a two-week shelf life. Both cantaloupe and watermelon produce sweet fruit and have a vining habit, but cantaloupe have a seed cavity and watermelon do not.



**Figure 3. The main types of cantaloupe melons are eastern (left) and western (right).**

Watermelons are larger, oblong, blocky fruits, generally with a solid green or green striped rind and bright red flesh, although they can also be orange or yellow fleshed. Watermelon varieties can also be without mature seeds.

The three types of watermelon differ by size and seeds (see Figure 4):

1. Diploid — Medium to large with seeds.
2. Icebox — Small and round with seeds.
3. Triploid — Large and “seedless,” or having only small, immature seeds.

Triploid watermelons are hybrids that lack growth hormones for normal fruit development and are, therefore, seedless. Triploid watermelons require insect pollination from diploid flowers (diploid varieties are planted with the triploids and are often included in seed packets) for successful triploid fruit development.

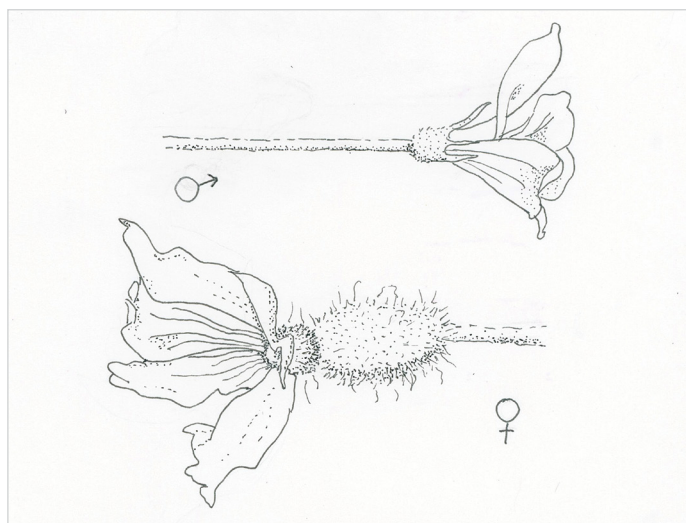
Cantaloupe and watermelon have either open-pollinated (including heirloom) or hybrid varieties. Seeds from heirloom varieties like Hale’s Best (cantaloupe), Charleston Gray (diploid watermelon) and Sugar Baby (icebox watermelon) have been saved for at least 50 years, can be saved each season and replanted, and are open-pollinated.



**Figure 4. The main types of watermelons (left to right): diploid, icebox and triploid.**

Cucurbit plants have separate male and female flowers on the same plant (termed monoecious), requiring pollen to be transferred from male to female flowers for proper fruit development to occur (see Figure 5). All cantaloupe and watermelon varieties are insect-pollinated, so if saving seed, different varieties must be separated by 800 feet to 1/2 mile for cantaloupe and 800 feet for watermelon to avoid easy cross-pollination. Generally, it is not recommended to save seed for future planting with hybrid varieties, as they are usually not expressed properly in the next generation.

It is recommended to select disease-resistant varieties whenever possible. See the recommended cantaloupe and watermelon varieties for Louisiana in Table 1.



**Figure 5. Melon plants are monoecious, meaning they have both male (top) and female (bottom) flowers on the same plant.**

**Table 1. Recommended Cantaloupe and Watermelon Varieties for Louisiana**

| Variety Name           | Description                                                                                                                                              | Days to Harvest* | Fruit Size | Resistance & Tolerance                        |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|-----------------------------------------------|
| <b>Cantaloupe</b>      |                                                                                                                                                          |                  |            |                                               |
| <b>Ambrosia</b>        | Eastern, round cantaloupe with peach-colored flesh; very sweet and juicy; very flavorful; small seed cavity; hybrid                                      | 86 days          | 4.5-5 lbs. | Downy mildew, powdery mildew                  |
| <b>Aphrodite</b>       | Round cantaloupe with salmon-colored flesh; slight netting; stores well; firm and sweet flesh; early variety; hybrid                                     | 80 days          | 6-8 lbs.   | Fusarium wilt, powdery mildew                 |
| <b>Athena</b>          | Round cantaloupe with peach-colored flesh; resistant to cracking, with tough rind; good shelf life; widely adapted; hybrid                               | 79 days          | 5-6 lbs.   | Fusarium wilt, powdery mildew                 |
| <b>Hale's Best</b>     | Eastern, oval cantaloupe with salmon-colored flesh; juicy and flavorful; heavy netting and slightly ribbed; thin rinds; heirloom variety from California | 80-86 days       | 4-5 lbs.   |                                               |
| <b>Primo</b>           | Oval cantaloupe with dark orange flesh; smooth rind; heavy netting; small seed capacity; firm, very sweet hybrid                                         | 79 days          | 5-7 lbs    | Downy mildew, Fusarium wilt, powdery mildew   |
| <b>Watermelon</b>      |                                                                                                                                                          |                  |            |                                               |
| <i>Diploid/Seeded</i>  |                                                                                                                                                          |                  |            |                                               |
| <b>Allsweet</b>        | Large, oblong watermelon with dark green, thin stripes and bright red flesh; very sweet; open-pollinated                                                 | 90 days          | 25-30 lbs. | Anthracnose, Fusarium wilt                    |
| <b>AU Producer</b>     | Blocky, round watermelon with bright red flesh; sweet; stores well; high-yielding heirloom variety from Alabama                                          | 85 days          | 25-30 lbs. | Anthracnose, Fusarium wilt, gummy stem blight |
| <b>Black Diamond</b>   | Large, oblong watermelon with tough green rind and bright red flesh; flavorful; good foliage cover; productive; stores well; heirloom variety            | 90 days          | 40-75 lbs. |                                               |
| <b>Charleston Grey</b> | Oblong watermelon with light gray-green rind; fiberless red flesh; juicy, productive heirloom variety                                                    | 90 days          | 30-40 lbs. |                                               |
| <b>Crimson Sweet</b>   | Classic, oblong watermelon with bright red flesh; high quality; reliable; juicy and fine-textured flesh; dark green striping; open-pollinated            | 85 days          | 15-25 lbs  | Anthracnose, Fusarium wilt                    |
| <b>Desert King</b>     | Oblong watermelon with light green rind and yellow-pink flesh; very sweet; stores well; drought tolerant; heirloom variety                               | 85 days          | 12-20 lbs. | Sunburn                                       |
| <b>Jamboree</b>        | Long, blocky watermelon with bright, deep red flesh; very sweet and flavorful; uniform, adaptable hybrid                                                 | 88 days          | 25-30 lbs. | Anthracnose, Fusarium wilt                    |
| <b>Jubilee</b>         | Compact variety; oblong watermelon with red flesh; juicy and crisp; very sweet; open-pollinated                                                          | 90-95 days       | 10-13 lbs. | Anthracnose, Fusarium wilt                    |

| Variety Name                    | Description                                                                                                                                                                                                 | Days to Harvest* | Fruit Size | Resistance & Tolerance                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|----------------------------------------------------------------|
| <b>Moon and Stars</b>           | Large, oblong watermelon with dark green rind decorated with large yellow “moons” and small yellow “stars”; dark red flesh; very flavorful; grows well in warm temperatures; heirloom variety from Missouri | 85-105 days      | 40 lbs.    |                                                                |
| <b>Regency</b>                  | Long watermelon with gray-green rind and pink flesh; juicy and flavorful; hybrid                                                                                                                            | 85 days          | 30 lbs.    | Anthracnose, Fusarium wilt, hollow heart, white heart, sunburn |
| <b>Royal Star</b>               | Oblong watermelon with green striped rind and bright red flesh; very productive; stores well; small seeds; hybrid                                                                                           | 84 days          | 21-26 lbs. | Anthracnose, Fusarium wilt                                     |
| <b>Sangria</b>                  | Long watermelon with green striped rind and red flesh; juicy and flavorful; very sweet; hybrid                                                                                                              | 85 days          | 20-25 lbs. | Anthracnose, Fusarium wilt                                     |
| <b>Summer Flavor 720 or 710</b> | Oblong and blocky watermelon; green striped rind; bright red flesh; sweet and crisp; very productive; hybrid                                                                                                | 85 days          | 28-30 lbs. | Anthracnose                                                    |
| <b>Tendersweet</b>              | Oblong watermelon with green striped rind and orange flesh; productive; very sweet and flavorful; open-pollinated                                                                                           | 85 days          | 25-40 lbs. |                                                                |
| <i>Icebox</i>                   |                                                                                                                                                                                                             |                  |            |                                                                |
| <b>Sugar Baby</b>               | Small, round watermelon with solid dark green rind and deep red flesh; small seeds; high yielding; reliable; drought tolerant; grows well in cool conditions; heirloom variety                              | 75-77 days       | 6-12 lbs.  |                                                                |
| <i>Triploid/Seedless</i>        |                                                                                                                                                                                                             |                  |            |                                                                |
| <b>Amarillo</b>                 | Round watermelon with green striped rind; bright yellow flesh; sweet; hybrid                                                                                                                                | 82 days          | 15 lbs.    |                                                                |
| <b>Buttercup</b>                | Round watermelon with green striped rind and bright yellow flesh; flavorful; crisp and very sweet; productive hybrid                                                                                        | 90 days          | 14-16 lbs. |                                                                |
| <b>Gypsy</b>                    | Round watermelon with red flesh; uniform, flavorful hybrid                                                                                                                                                  | 75 days          | 13-17 lbs. | Anthracnose                                                    |
| <b>Millionaire</b>              | Oval blocky watermelon with thick, green rind and dark pink flesh; solid and firm; very productive; high quality; hybrid                                                                                    | 90 days          | 18-22 lbs. | Anthracnose, Fusarium wilt                                     |

Notes: \*From transplant to harvest

Table varieties selected from recommendations from LSU AgCenter, UF Extension, Texas A&M Extension and Southeastern U.S. Vegetable Crop Handbook.

Variety descriptions compiled from High Mowing Organic Seeds, Johnny's Selected Seeds, Reimer Seeds, Southern Exposure Seed Exchange, Sow True Seed, Jordan Seeds, Hoss Tools, Willhite Seed, Sustainable Seed Company, Osborne Seed, Sakata Seed America and Syngenta.

Other recommended varieties for Louisiana include:

Cantaloupe: Caravelle, Gold Strike, Magnum 45, Mainstream, Mission, Perlita, Royal Sweet, Star Brite, Uvalde.

Watermelon: Imagination, Liberty, Matrix, Mickey Lee, Millennium, Mirage, Patriot, Revolution, Stars 'n' Stripes, Summer Gold, Tender Gold, Treasure Chest, Tri-X 313, Vanessa.

## When and How to Plant

Cantaloupe and watermelon seeds should be direct-seeded outside or transplanted during the recommended planting dates (see Table 2). As warm-season crops, plant outside when the soil temperature has warmed to at least 60-65 degrees Fahrenheit (there should be no danger of frost), although cantaloupe prefer 65-75 F and watermelon prefer 70-85 F. Seedlings are susceptible to cold shock and may be stunted if soil and air temperatures are too low. The use of a soil temperature map can help guide planting decisions.

Refer to the Melon and Watermelon Planting Guide (Table 2) for the recommended spacing when direct-seeding or transplanting and allow plenty of space for vines to sprawl. Plant 6-8 seeds about 1-2 inches deep in a hill. Cover with soil and water in; seedlings should emerge in 10-12 days. When they emerge, thin to 3-4 plants per hill. When a few true leaves develop, thin to two plants per hill (if necessary). Early plantings may require a row cover for protection. The optimum growing conditions are hot, dry days (80-95 F) and warm nights (65-70 F).

**Table 2. Melon and Watermelon Planting Guide**

| Category   | Transplant Outside Dates                           | Hill Spacing<br>(feet) | Row Spacing<br>(feet) | Days to Harvest*            |
|------------|----------------------------------------------------|------------------------|-----------------------|-----------------------------|
| Cantaloupe | North LA: April-July<br>South LA: March 15-Aug. 15 | 1-3'                   | 5-6'                  | 85-110 days<br>(70-90 days) |
| Watermelon | North LA: March 15-June<br>South LA: March-July 5  | 2-5'                   | 6-12'                 | 80-100 days<br>(60-90 days) |

\*First range of days: seed to first harvest. Second range of days in parenthesis: transplant to first harvest.

Note: Table adapted from LSU AgCenter and UF Extension Planting Guides and Southeastern U.S. Vegetable Production Handbook.

In general, growing triploid watermelon takes more care and management than diploid watermelon. Triploid seeds germinate poorly, especially at low temperatures, and the seeds are more expensive and less vigorous. The seed coat of these seedless watermelons tends to stick to the seedling as it emerges, at times slowing/distorting seedling growth. For these reasons, they should be established as indoor transplants 2-4 weeks before the desired transplant date (see Table 2 for recommendations). Use large seed germination trays that are at least 1.5 inches in diameter to allow space for root growth. Soilless potting mix should be pre-watered and allowed to drain before seeding and no additional moisture applied for at least 48 hours after seeding. Using good quality seed with high germination, only one seed per cell is sufficient. Seeds should be positioned with the pointed end (radicle) up to reduce seed coat sticking to cotyledons. Seeds will germinate best in a well-lit area (such as a greenhouse or windowsill) with a temperature between 85-90 F for 48 hours. A seedling heat mat and plastic dome lid are helpful in maintaining ideal germination conditions. After germination, seedlings grow well in temperatures between 70-80 F during the day and between 65-70 F at night. Keep soil moist, which usually requires daily light watering. Cantaloupe and diploid watermelons may also be started as transplants

using the same process. Seed trays can be kept at 65-80 F after emergence (usually 5-10 days).

A few days before planting transplants outside, it is recommended to follow a hardening off process to transition seedlings to outdoor conditions. Cantaloupe and watermelon transplants should have 2-3 true leaves when planted outside. Transplant 1-2 melon seedlings per hill.

## Where to Plant

Cantaloupe and watermelon prefer well-drained, sandy loam soil and full sun (6 hours/day) is required; they don't tolerate heavy, clay soil. Cantaloupe and watermelon plants prefer a soil pH between 6.0 and 7.5, but watermelon can tolerate more acidic soils with a pH as low as 5.5. It is recommended to plant in box beds, traditional raised garden rows that are about 4-8 inches tall and 12-14 inches wide, or hills to ensure good drainage and prevent disease. In all types of gardens, it is recommended to add a 2-3-inch layer of compost, peat moss, rotted hay or other organic matter and mix into the soil to optimize plant health. If growing melons in soil with poor fertility or in cool temperatures, the fruit may not be flavorful or sweet. Due to their vining habit, cantaloupe and watermelon plants require a lot of space.

Black, white or reflective plastic mulch — or a plastic fabric/film — is recommended to increase soil temperature, yield, fruit size and quality while controlling weeds and preventing insect pests and disease. Mulching will also help to deter common melon insect pests like cucumber beetles. Drip irrigation is also recommended when using plastic mulch to maintain ideal soil moisture and to encourage productive plants.

Floating fabric row covers are also recommended for this crop, especially when planting early, to improve growth and deter pests during the seedling stage. Row covers should be removed when plants begin to bloom in order to optimize pollination.

Each season rotate plant families — avoid planting crops from the same plant family in the same area of the garden — to reduce disease and pests. A longer crop rotation of 3-4 years is recommended for *Cucurbitaceae* crops to reduce insect pest pressure and risk of disease.

## Plant Care

It is recommended to follow [sustainable gardening](#) principles.

**Watering:** Take care not to overwater melons as this will result in less sweet fruit and increase the risk of cracking. Cantaloupe planted in sandy soils will require about 1 inch of water twice a week. Watermelons have fairly deep roots and are more drought tolerant, but adequate water is essential after seeding/transplanting outside for blooming, fruit set and growth. Watermelon require about 1-2 inches of water every 10-14 days until fruit are close to harvest size. At this point, stop watering to maximize fruit quality and avoid diluting sugars in the fruit.

**Fertilization:** Cantaloupes and watermelons require adequate but not excessive nutrients for good development. Overfertilization with nitrogen may cause plants to remain in a juvenile, vining stage and delay flowering and fruiting. Deficiency in calcium may result in blossom-end rot of watermelons. A physiological disorder, calcium deficiency is more often a problem with uneven watering, which causes calcium to remain undissolved in the soil and unavailable for uptake by plant roots. If the problem persists with consistent watering, soil testing is recommended. The soil test results and interpretation may be discussed with the local county extension agent. Uneven watering (cycling between very wet and very dry) can also contribute to hollow heart in watermelon.

Organic fertilizers such as compost, fish emulsion,

composted poultry litter or manure, worm castings, and blood or bone meal originate from living organisms. They are far more environmentally sustainable and safe than traditional synthetic fertilizers. They naturally release nutrients more slowly and over a longer period of time. When applying organic fertilizer, it is important to use in unison with compost, cover crops and crop rotation, which all work together to build soil health. Learn how to convert inorganic fertilizer recommendations to organic fertilizers [here](#).

Alternatively, a synthetic fertilizer may be used at a rate of about 1.25 pound (2.5 cups) of 13-13-13 for every 25 feet of row or 75 square feet. Broadcast, or sprinkle evenly, over the soil before planting and then mix in about 3-6 inches deep using a rake. Supplemental side-dressing, or reapplication of synthetic or organic fertilizer, is recommended when plants start vining. Side-dressing is the addition of a small amount of fertilizer to the soil around already established plants when the plant begins to fruit or vine, primarily to provide nitrogen. Sprinkle 2 tablespoons around each plant, keeping it about 6 inches away from the plant stem; water into the soil. Additional side-dressing may be applied every 3-4 weeks. Because of their slow, steady release of nitrogen, crops fertilized with organic fertilizer do not need to be side-dressed. Fish emulsion may be used as a quick-release form of organic fertilizer if needed.

**Support:** Trellising cantaloupe and watermelon is not necessary, but this vining crop requires lots of soil surface to sprawl in the garden or field (see Figure 6).



**Figure 6.** Cantaloupe and watermelon are vining crops with a sprawling habit.

If grown vertically they will require much less room and can even be planted in box beds. Due to the large fruit weight, growing cantaloupe and watermelon vertically will require strong trellis materials such as wire cattle fencing and an innovative sling for individual fruit. See this [video](#) on how to create an easy melon sling.

**Weeds:** Plastic mulch will control most of the weeds; hand pull weeds close to the plant, especially in the planting holes. It is important not to allow weeds to shade plants because they have a low, sprawling habit. These crops have a deep tap root as long as 36 inches for cantaloupe and 60 inches for watermelon.

**Insect pests and diseases:** Aphids are a common insect pest for cantaloupe and watermelon plants and can transmit harmful viruses like cucumber, watermelon and zucchini yellow mosaic viruses. Other common

insect pests include cucumber beetles, spider mites, squash vine borer and squash bugs. Regular monitoring can help identify symptoms of these insect pests and allow for early treatment and management. These crops are also susceptible to viruses (e.g., cucumber, watermelon and zucchini yellow mosaic viruses), fungal diseases (e.g., anthracnose, downy and powdery mildew), and physiological disorders (e.g., blossom-end rot). Some varieties are resistant to specific diseases and these should be selected and planted. Generally recommended tools for prevention are using reflective mulches, avoiding overhead irrigation, improving air circulation and crop rotation (at least three to four years). See Table 3 to aid in diagnosis and management of some common melon insect pests and diseases.

**Table 3. Organic and Natural Management for Common Cantaloupe and Watermelon Pests and Diseases**

| Symptoms                                                                                                                                                                                                                                                                                                                                                                                                                         | Diagnosis                                                | Organic and Natural Management                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Warm, humid conditions</li> <li>• Small yellow-green, water-soaked spots on lower and older leaves</li> <li>• Older spots become brownish-black with yellow halo</li> <li>• Defoliation, sunscald</li> <li>• Blossom drop and yield loss</li> </ul>                                                                                                                                     | Alternaria leaf spot                                     | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Crop rotation</li> <li>• Maintain good growing conditions; reduce plant stress</li> <li>• Avoid overhead irrigation</li> <li>• Avoid working in wet fields</li> <li>• Copper-based fungicide sprays</li> </ul>                                                                                       |
| <ul style="list-style-type: none"> <li>• Warm, humid temperatures with frequent rainfall</li> <li>• Circular yellow-tan lesions on leaves that turn black</li> <li>• Elongated lesions on stems and petioles</li> <li>• Scorched-looking plants</li> <li>• Sunken, circular, water-soaked lesions on large fruit</li> <li>• Pink/salmon-colored spores in center of lesions on fruit</li> <li>• Malformed young fruit</li> </ul> | Anthracnose                                              | <ul style="list-style-type: none"> <li>• Crop rotation (3 years)</li> <li>• Plant resistant varieties</li> <li>• Avoid working in fields when plants are wet</li> <li>• Mulch; avoid overhead irrigation</li> <li>• Regular harvest; remove diseased fruit</li> <li>• Organic/natural fungicides</li> </ul>                                                                        |
| <ul style="list-style-type: none"> <li>• Curled and yellowed leaves</li> <li>• Stunted crops</li> <li>• Sticky honeydew on leaves</li> </ul>                                                                                                                                                                                                                                                                                     | Aphids                                                   | <ul style="list-style-type: none"> <li>• Timely planting and harvest</li> <li>• Reduce water stress</li> <li>• Weed control</li> <li>• Use water jet to dislodge</li> <li>• Reflective mulches; insect barrier fabric</li> <li>• Beneficial insects: lady bugs, lacewings, predatory stink bugs, syrphid flies</li> <li>• Insecticidal soap, neem oil, pyrethrin, Azera</li> </ul> |
| <ul style="list-style-type: none"> <li>• Misshapen fruits with brown lesion on blossom end</li> <li>• Premature fruit ripening</li> <li>• Dry weather; calcium deficiency</li> <li>• Drought stress; root damage</li> <li>• Over-irrigation, high humidity</li> </ul>                                                                                                                                                            | Blossom-end rot                                          | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Keep soil pH at 6.0-6.5.</li> <li>• Fertilize (abundant calcium) and mulch</li> <li>• Adequate, consistent irrigation, avoiding wet/dry extremes</li> <li>• If soil is calcium deficient, drench soil around plants with calcium solution; remove fruit</li> </ul>                                   |
| <ul style="list-style-type: none"> <li>• Transmitted by aphids</li> <li>• Yellow-green mottling or mosaic pattern on leaves</li> <li>• Distorted, deformed leaves</li> <li>• Stunted young leaves and plants</li> <li>• Low yield; small, deformed, discolored fruit</li> </ul>                                                                                                                                                  | Cucumber, watermelon, and zucchini yellow mosaic viruses | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Control aphids and weeds</li> <li>• Remove and destroy infected plants and crop debris</li> </ul>                                                                                                                                                                                                    |

| Symptoms                                                                                                                                                                                                                                                                                                                          | Diagnosis         | Organic and Natural Management                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Cream-colored larvae, ⅜-inch long</li> <li>• Adult yellow beetles with black spots/stripes; ¼-inch long</li> <li>• Feeding damage on foliage, especially young leaves</li> <li>• Often causes bacterial wilt (vines suddenly wilt and die)</li> <li>• Stunted plants or death</li> </ul> | Cucumber beetle   | <ul style="list-style-type: none"> <li>• Crop rotation</li> <li>• Trap cropping (Hubbard squash)</li> <li>• Dip/spray seedlings with kaolin clay (can also combine with insecticidal soap or neem oil)</li> <li>• Floating row cover</li> <li>• Beneficial insects: parasitic wasp</li> <li>• Remove crop debris</li> <li>• Insecticides: pyrethrin, neem, sabadilla</li> </ul> |
| <ul style="list-style-type: none"> <li>• Damp, cool conditions</li> <li>• Small, yellowing, angular patches on leaves</li> <li>• Damping off</li> </ul>                                                                                                                                                                           | Downy mildew      | <ul style="list-style-type: none"> <li>• Crop rotation (2+ years)</li> <li>• Plant resistant varieties</li> <li>• Reduce leaf moisture by improving air circulation, morning irrigation</li> <li>• Remove crop debris and weeds</li> <li>• Organic/natural fungicides</li> </ul>                                                                                                |
| <ul style="list-style-type: none"> <li>• Damping off in seedlings</li> <li>• Brown streaks inside root and lower stem when split lengthwise</li> <li>• Bacterial wilt is transmitted by the cucumber beetle</li> <li>• Plants wilt and die</li> </ul>                                                                             | Fusarium wilt     | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Long crop rotation</li> <li>• Weed control</li> <li>• Control cucumber beetles</li> <li>• Remove infected crop debris</li> </ul>                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• Small, round white spots with fungal growth on older leaves with dark mottled underside</li> <li>• Leaves covered with talc-like powder; leaf yellows and dies</li> <li>• Hot, dry conditions</li> </ul>                                                                                 | Powdery mildew    | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Good soil health and air circulation</li> <li>• Increase plant spacing</li> <li>• Eliminate weeds</li> <li>• Organic/natural fungicides containing sulfur</li> </ul>                                                                                                                              |
| <ul style="list-style-type: none"> <li>• Spiderlike pests, very small</li> <li>• Feeding on underside of leaves causes yellow spots and tiny webs</li> <li>• Begins around garden perimeter, grassy areas</li> </ul>                                                                                                              | Spider mites      | <ul style="list-style-type: none"> <li>• Timely plant and harvest</li> <li>• Adequate irrigation</li> <li>• Beneficial insects: predatory mites</li> <li>• Restrict mowing grass close to crops</li> <li>• Paraffinic and neem oil, sulfur dust, Chenopodium terpene extract, Soluble Silica, Aramite, Biomite</li> </ul>                                                       |
| <ul style="list-style-type: none"> <li>• Bugs are grayish-brown, ½ to ¾-inch long; flat back</li> <li>• Bugs found on underside of leaves, under plastic mulch or debris</li> <li>• Crop damage, wilt, death</li> </ul>                                                                                                           | Squash bug        | <ul style="list-style-type: none"> <li>• Plant resistant varieties</li> <li>• Row cover</li> <li>• Trap cropping (Hubbard squash)</li> <li>• Handpick and destroy bugs</li> <li>• Remove or till crop debris</li> <li>• Beneficial insects: tachinid fly</li> <li>• Insecticides: pyrethrin or sabadilla</li> </ul>                                                             |
| <ul style="list-style-type: none"> <li>• White larvae, 1-inch long, outside and inside stem near the soil</li> <li>• Vine wilt and death</li> </ul>                                                                                                                                                                               | Squash vine borer | <ul style="list-style-type: none"> <li>• Mix charcoal into soil just before planting</li> <li>• Apply rotenone around plant base</li> <li>• Floating row cover</li> <li>• Pheromone-baited sticky traps</li> <li>• Slice open stems of infested plants and destroy vine borers</li> </ul>                                                                                       |

*Note: Table adapted from LSU AgCenter, Texas A&M AgriLife Extension, UMass Extension; Alabama A&M and Auburn Universities Extension and University of Minnesota Extension. The Louisiana Pesticide Law regulates the use of pesticides in schools to protect children and staff from harmful exposure to chemicals and is enforced by LDAF. The recommended alternative to routine pesticide use is Integrated Pest Management (IPM), which combines pest control, disease management techniques and organic/natural alternatives, many of which are found in this table.*

# Harvest and Storage

When ripe, the exterior of the cantaloupe will turn beige and should easily slip from the vine when harvested. If the fruit has a “full slip” from the stem (naturally slips off with no stem attached to the fruit), it is fully ripe and should be consumed within 3-4 days. Cantaloupe are often harvested at a “half-slip” (partially slipped, leaving half of the stem/pedicle attached to the fruit) so they will store for 2 weeks. During peak production, cantaloupes may be harvested every 3 days. Cantaloupe should be stored between 36-41 F (95% humidity).

Watermelon do not slip from the vine like cantaloupe when they are fully ripe. Varieties differ in their times to maturity, and there are several signs that are used to determine maturity. Watermelon should be harvested

when the underside touching the ground (ground spot) turns from white to yellow and tendrils near the fruit are brown and dry; this normally is around 45 days after fruit set. The skin should not be easily penetrated by a fingernail and should feel rough to the touch. A dull thud when tapping the fruit may also indicate ripeness. It is recommended to cut watermelons from the vine in order to leave a small stem (1-2 inches). Fruit should be stored between 50-60 F (90% humidity) for 2-3 weeks.

One cantaloupe or watermelon plant will produce 1-2 fruits for large varieties or 4-6 fruits for small varieties. Cantaloupe and watermelon are generally eaten fresh, but watermelon rinds may be preserved by pickling and canning.

## Nutrition

### Cantaloupe and Watermelon Are Nutritious and Good for You

#### Good source of vitamin A

*Important for eye health, a strong immune system and cell growth.*

#### Rich in vitamin C

*Important for bones, skin and blood vessels.*

#### High in potassium

*Essential for body function, especially the heart, kidney, nerves, bones and muscles.*

#### Watermelon contains the carotenoid lycopene

*Antioxidant that may prevent cancer and improve heart health.*

# Recipes

## Basics of cooking with cantaloupe and watermelon:

**Cantaloupe:** [extension.purdue.edu/foodlink/food.php?food=cantaloupe](https://extension.purdue.edu/foodlink/food.php?food=cantaloupe)

**Watermelon:** [extension.purdue.edu/foodlink/food.php?food=watermelon](https://extension.purdue.edu/foodlink/food.php?food=watermelon)

General information on selecting, pairing, preparing and storing. Also includes a list of recipes.

## Video on how to prepare cantaloupe and watermelon:

**Cantaloupe:** [youtu.be/i2EszO-ozMo](https://youtu.be/i2EszO-ozMo)

**Watermelon:** [youtu.be/gfm5wYoVzAA](https://youtu.be/gfm5wYoVzAA)

Ever wondered about the basics of how to use cantaloupe, honeydew and watermelon? Chef Allison Kingery shows a couple of options for preparing your fruit.

## Taste Test Ideas



**Melon Smoothie Bowl**



**Fruit Salad**



**Melon Popsicles**

## Other websites with many cantaloupe and watermelon recipes:

### Arizona Health Zone

Visit [www.azhealthzone.org/recipes](https://www.azhealthzone.org/recipes) and search for cantaloupe and watermelon recipes.

Recipes include summer fruit salad, melon skewer, gazpacho and more.

### USDA MyPlate Kitchen

Visit [www.myplate.gov/myplate-kitchen/recipes](https://www.myplate.gov/myplate-kitchen/recipes) and search for cantaloupe and watermelon recipes.

Recipes include cantaloupe cooler, grilled shrimp with cantaloupe, watermelon cake and more.

### California's Eat Fresh

Visit [eatfresh.org/find-a-recipe](https://eatfresh.org/find-a-recipe) and search for cantaloupe and watermelon recipes.

Recipes include icy fruit pops, fruit salad sundae, watermelon salsa and more.

### Produce for Better Health Foundation

**Cantaloupe:** [fruitsandveggies.org/fruits-and-veggies/cantaloupe/?view=recipes](https://fruitsandveggies.org/fruits-and-veggies/cantaloupe/?view=recipes)

Recipes include cantaloupe smoothie bowl, sliced melon salad with spicy lime dressing and more.

**Watermelon:** [fruitsandveggies.org/fruits-and-veggies/watermelon/?view=recipes](https://fruitsandveggies.org/fruits-and-veggies/watermelon/?view=recipes)

Recipes include fresh watermelon with chili lime seasoning and more.

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